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Agricultural Research Service

U.S. National Arboretum

News and Notes

Fall 2005

News and Notes is issued three times a year, in January, May, and September, to stakeholder organizations to keep them informed about recent National Arboretum accomplishments and activities. Stakeholders are encouraged to use material from this document in reports to their members. Please send comments to:

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Flowering Tree Walk Completed—Planting to Begin this Fall

A ribbon of walkway, the Flowering Tree Walk, now connects the Capitol Columns with the National Herb Garden and the National Bonsai and Penjing Museum. Another section connects the National Herb Garden to the Azalea Collections and the Capitol Columns Overlook. This new feature, funded by the Friends of the National Arboretum through a bequest from Rosalie M. Koch, will showcase a variety of flowering trees along its path and represents an important advance in tying collections together and improving accessibility for the handicapped. The land near the Flowering Tree Walk was also sculpted to form a broad wetland that will be used to detain runoff and cleanse it of pollutants before it is released into a ravine that leads to nearby Hickey Run, a tributary of the Anacostia River. It will provide a home for sedges, rushes, and other plants native to wet meadows.

In a closely related project, a similar elliptical pathway has been constructed that now connects the Capitol Columns with a new parking area at the intersection of Ellipse Road and Beechwood Road. The parking area and the path now make it possible for handicapped visitors to easily reach the Capitol Columns. Funding for this project was provided by U.S. National Arboretum repair and maintenance funds. The parking area is equipped with a small bioretention pond that will help to intercept any pollutants from the parking area.



View of the flowering tree walk leading from the Capitol Columns to the Herb Garden.

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The Flowering Tree Walk and Capitol Columns accessible path were designed by Mahan Rykiel Associates, located in Baltimore, Maryland. The design was approached with great sensitivity to its context and purpose in unifying other features. The path is constructed of concrete that is colored and textured to harmonize with the tawny grasses of the meadow. Benches will soon be installed along the length of the path to provide resting places for those who want to enjoy the open expanse of the meadow and columns that rise above it. Bench areas and plazas constructed near the Capitol Columns and the Columns Overlook feature Eurocobble® pavers that add a touch of elegance to the walk. Vigil Contracting, of Crofton, Maryland, provided construction services for the project. Dhillon Engineering of Reisterstown, Maryland, served as the subcontracting engineering firm. (For previous articles on the Flowering Tree Walk and the Arboretum master plan visit <http://www.usna.usda.gov/Information/NewsNotes.html> and view the Fall 2004 and Winter 2005 News and Notes.)

With the construction of the walkway complete, attention will now turn to planting. While the open character of the meadow surrounding the Capitol Columns will be maintained, trees will be planted in groups along its length beginning this fall. The Flowering Tree Walk will feature a diversity of small trees that can be grown successfully in our area. It will consist primarily of trees that are not

common in the nursery trade, thus visitors can learn about trees that they might otherwise never see, such as fragrant epaulette tree, *Pterostyrax hispida*. Unusual variations of more common trees will also be featured—Mexican dogwood, *Cornus florida* var. *urbiniana* and pink-flowered yellowwood, *Cladrastis kentuckea* ‘Rosea’, are two examples. The unifying element in the Flowering Tree Walk will be crapemyrtles, in a variety of flower colors to give the collection strong summer interest (for a checklist of crapemyrtles, visit <http://www.usna.usda.gov/Research/Herbarium/Lagerstroemia/>).



Mexican dogwood, *Cornus florida* var. *urbiniana*, is an unusual dogwood in many respects. The bracts remain fused at their tips as the flowers open, the leaves have a slightly blue tint, and vibrant fall color appears as late as Thanksgiving, well after most dogwoods have lost their leaves. It is one of the outstanding unusual trees that will be planted along the new Flowering Tree Walk.

The Herb Society of America Raises \$25,000 for the National Herb Garden

The Herb Society of America (HSA) announced at their annual meeting in June that they had raised over \$26,000 to support an intern for the Arboretum’s National Herb Garden. The Society’s National Herb Garden

Committee planned the fund raising effort as part of the celebration of the 25th anniversary of the National Herb Garden.

After the National Herb Garden’s dedication 25 years ago, the HSA continued its support for the garden through a special committee. The committee works closely with the herb garden curator to plan educational activities. They also help raise funds for the garden, particularly in support of an annual internship position. In the early days, the internship was a three month position, but has expanded over the years to a six-, ten-, and now twelve-month position. To ensure that the twelve-month internship continues, and to possibly add an additional internship, the committee planned a special anniversary campaign. The project was called “25 for 25,” and the goal was to raise \$25,000—a thousand dollars for each year of beauty in the garden—for the National Herb Garden endowment fund held by the HSA. In April, a letter went to HSA members asking them or their unit to donate to the fund. Donations started rolling in immediately, not only from individuals in the United States, but also from overseas and from people and garden clubs not affiliated with HSA. With such outstanding and enthusiastic support it took only months for the committee to exceed its goal. With the endowment fund now substantially bolstered, HSA has a more secure basis of support for internship positions in the garden. The Arboretum is grateful to all of the Herb Society of America members and other friends whose

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generous donations supported this effort. (To read more about the National Herb Garden, visit <http://www.usna.usda.gov/Gardens/collections/herb.html>.)



Jessica Blackford working in the Herb garden.

Classical Chinese Garden Receives Official Name and Festival

United States Department of Agriculture Undersecretary Joseph Jen unveiled the official name of the classical Chinese garden planned for the National Arboretum at an August 12, 2005, press conference at the Arboretum. The name will be China Garden. Undersecretary Jen also announced plans for an Autumn Moon Festival to be held on September 17, 2005, at the Arboretum. The festival, an evening of cultural activities, food, and moon viewing, is sponsored by a group of Chinese American organizations including the Friends of the China Garden. Funds raised at the festival will go toward the garden. During the press conference, Mr. Jin, Minister of Science and Technology at the Chinese Embassy, spoke on

the history of this historic joint venture between China and the United States.

An important step towards the final design for the China Garden took place in June, 2005, when the U.S. Commission on Fine Arts approved the conceptual plan for the garden. The presentation, made by USNA Director Dr. Thomas Elias, was well received by the Commission members, who are supportive of the project and will work with the Arboretum during each step of its development.

For the first time in its history, the Arboretum will host a Chinese Moon Festival in conjunction with over 10 major Asian organizations in the Washington, D.C., area. The event date, September 17, 2005, coincides with the actual Moon Festival date in the lunar calendar. Activities scheduled for the evening include sampling a buffet from area Chinese restaurants, participating in the tea ceremony at the National Bonsai & Penjing Museum, tasting gourmet teas and a moon cake, and viewing a film explaining the origins of the Moon Festival. Chinese musicians will play in several of the gardens to enhance participants' experiences of the collections. A display of Chinese art and calligraphy as well as a live calligraphy demonstration and a silent auction will take place in the lobby of the administration building. Tram tours will highlight the many Asian aspects of the Arboretum and staff will discuss herbal medicine in the National Herb Garden.

In addition to the September festival, there are a number of projects in the planning stages that will help the China Garden towards its goal. An

Arboretum summer intern, Chia Whitehouse, initiated planning for a new look for the garden's website pages, giving them more interactivity and adding a photo gallery of some of the stones and buildings that will be gifts from China to the garden. Chia also created a flier for on-site visitors that will lead them to the future site of China Garden. The handout includes a descriptive map that allows visitors to take a virtual walk through the garden before it is built. All these efforts are designed to both educate and excite stakeholders and the general public about the new garden. (For more about the China Garden see <http://www.usna.usda.gov/Gardens/collections/ClassicalChineseGarden.html>.)



USNA Community Partnership Cleans Up Fence Line

On Thursday morning, August 8, 2005, over 25 arboretum staff members joined residents of the Langston Carver Terrace community for a major cleanup project along the southern boundary of the U.S. National Arboretum. This effort was part of a joint project involving the Executive Office of the Mayor of the District of Columbia, local

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Advisory Neighborhood Commissions, the D. C. Department of Public Works, and local residents. This project will help upgrade and improve the neighborhood in the area of M Street in Northeast Washington, D.C. The work involved the removal of tons of numerous weed trees, shrubs, vines, and illegally dumped trash and debris. The Arboretum, the neighborhood, and the District of Columbia will continue to work together on this and future projects. Step by step, the residents, city, and Arboretum staff are making headway in removing a blighted strip of land paralleling the Arboretum and many homes.

Arboretum staff worked in this area on several occasions in 2004 and made significant progress in removing dozens of large weed trees, dozens of shrubs, and debris. Arboretum Director Thomas Elias, Mayor Anthony Williams, and Congresswoman Eleanor Holmes Norton met with neighborhood residents for a “A Great Day in the Neighborhood” to kick off this major cleanup effort.

New Virtual Tour Added to USNA Website

The Gotelli Dwarf and Slow-Growing Conifer Collection virtual tour is the second in a series of virtual tours to be added to the Arboretum’s website. The first virtual tour of the National Bonsai & Penjing Museum debuted last year and is among the most popular

features viewed, according to the Arboretum’s website tracking program. The Gotelli virtual tour will introduce website visitors to the collection, giving them a sample of what can be seen on the grounds. Beautiful images and descriptive text highlight the many conifers and companion plants dotted throughout its seven acres. To view the virtual tour go to <http://www.usna.usda.gov/Gardens/collections/VirtualTours/GotelliVirtualTour.html>. The Arboretum’s virtual tours are an excellent forum for public outreach as well as an encouragement for people to visit the campus personally. Other virtual tours of the Arboretum’s collections and gardens will be added in the coming months.

New Edition of Crapemyrtle Cultivar Checklist Available

In addition to breeding, evaluating, and selecting new and improved cultivars of crapemyrtles, the National Arboretum is also responsible for serving as the International Cultivar Registration Authority (ICRA) for the genus. The ICRA serves several important roles in promoting stability in nomenclature, including registering and publishing cultivar names and maintaining records of historical and current cultivar names, origins, and descriptions.

The previous version of the *Lagerstroemia* (crapemyrtle) checklist was published in 1978, which is the same year that the first two hybrid crapemyrtles ‘Natchez’ and ‘Muskogee’ were introduced by the National Arboretum. Since then, many new crapemyrtle cultivars

have been developed and introduced by the Arboretum and other programs. Unlike the first edition, this latest edition of the checklist will not be published in hard copy, but is posted on the National Arboretum’s web site: <http://www.usna.usda.gov/Research/Herbarium/Lagerstroemia/>. It serves to document and validate the names of many of these newer cultivars.

The original checklist was written by Don Egolf, former shrub breeder at the Arboretum, and his assistant, Anne Andrick. This updated version was compiled by Ruth Dix, who also worked for many years as Dr. Egolf’s assistant. Although Ruth has retired, the National Arboretum will still serve as the ICRA for crapemyrtles. Please send information regarding registration of crapemyrtle cultivar names to Margaret Pooler at poolerm@ars.usda.gov.

Stakeholder Committee Provides Guidance on Woody Ornamental Germplasm Issues

The National Arboretum hosted the annual meeting of the Woody Landscape Plant Crop Germplasm Committee (WLPCGC) on July 12-13, 2005. This group, composed of individuals representing industry, universities, arboreta, and government, meets yearly to advise ARS on issues relating to genetic resources (germplasm) of woody landscape plants. This year’s meeting included tours of the

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germplasm repository in Glenn Dale, Maryland, and the new field site at Beltsville's South Farm. Crop Germplasm Committees (CGCs) work with the USDA's National Plant Germplasm System, a network of sites located throughout the country that manages working collections of plant genetic resources for all major agricultural and horticultural crops. Curation of each of these collections relies in part on advice from the associated Crop Germplasm Committee, which is composed of users of that crop. The Woody Landscape Plant Germplasm Repository is a part of the National Arboretum that relatively few stakeholders are aware of, as it isn't open to the public, and it is not even on the Arboretum's grounds. This unit, located in Glenn Dale and Beltsville, Maryland, contains one of the country's most extensive collections of documented wild-origin genetic resources of trees and shrubs for landscape use. The WLPCGC plays a role in advising how these genetic resources can be collected, preserved, evaluated, and distributed.

Ornamental horticulture is one of the largest and fastest growing segments in agriculture, ranking behind only corn and soybeans in total cash receipts. By preserving genetic material that can be used for breeding and selection of improved landscape plants, the National Arboretum is playing a key role in ensuring the long-term viability of this important component of our agricultural economy. With continued input from and partnerships with user groups from

industry, universities, NGOs, and other institutions, we can ensure that these resources are preserved and used with the greatest benefit to the U.S. consumer.

For more about the Floral and Nursery Plants Research Unit see <http://www.usna.usda.gov/Research/index.html>.



Flower of *Stewartia*, one of the many genera that the Woody Landscape Plant Germplasm Repository helps to curate.

5th World Bonsai Convention

The USNA co-sponsored the 5th World Bonsai Convention that was held from May 27-31 in Washington, D.C. Over 960 bonsai artists, leaders, and participants came from six continents and 23 countries making this the largest event of its kind ever held in North America. Demonstrations, workshops, lectures, meetings, exhibits of bonsai, viewing stones, pots, and a sales area were major features of the convention. Bonsai represents one of the oldest forms of container grown plants in the world, dating back over 3,000 years. It represents a specialized subset of the ornamental nursery industry.

The USNA is home to the National Bonsai & Penjing Museum, the largest, oldest, and most

comprehensive museum of its kind in the western world. The Arboretum hosted tours of the museum and a dinner on Sunday evening, May 29, to 600 participants. As a result of the convention and event, the Arboretum received many valuable donations to the museum. This further increases the value as well as the breath of its collections.

Mr. Jack Sustic, curator of the bonsai museum, served as co-chair of the convention and also led a workshop during the convention. Dr. Thomas Elias, Arboretum director, gave a lecture on the discovery and introduction of bonsai in the west. Arboretum staff members Jim Hughes, Michael James, and Susan Burgess played major roles in supporting the convention and Sunday dinner.

Co-sponsors of this major event included the National Bonsai Foundation, Bonsai Clubs

International, American Bonsai Society, and the Potomac Bonsai Association. The North American Friendship Federation served as the host of the convention.



New Interpretive Signs Added to Administration Building Pool

A stroll around the Administration Building pool raises similar questions in visitors' minds: Why is the water black? Are these really big goldfish? Where to the fish go in the winter? These and other frequently asked questions are now answered through six interpretive signs in the pool. Visitors' natural curiosity seemed the best source of subject matter for the signs, and indeed, overheard comments include, "Oh, I didn't know that!" and "We should try this in our pool." Arboretum staff worked with USDA Design and ARS Information staff to create the signs. The challenge was to make them large enough to be read, but small enough to not negatively impact aesthetic appreciation of the pool.



Severe Summer Storm Downs Trees

The Arboretum suffered major damage as a violent storm hit during the early morning hours on Saturday, July 23rd. High winds and lightening damaged dozens of trees, leaving fallen giants blocking roads and paths and numerous



broken branches hanging dangerously. Arboretum staff and emergency arborist crews arrived to stabilize the hazards; cleanup continued for several weeks. Mature trees were downed along Hickey Run destroying about 100 feet of fence. Other mature trees were lost in the Azalea Collections, the National Grove of State Trees, the Gotelli Dwarf and Slowing Growing Conifer Collection, and the Administration Building parking lot. The effects of the storm were felt in all the collections on the grounds, however, with a large number of trees so badly damaged that they will have to be removed.

Research Unit Scientists Share Findings at Meetings and Conferences

The Floral and Nursery Plants Research Unit (FNPRU) scientists have been active in sharing research results with stakeholders and other scientists at national and international meetings. In addition to serving as a forum for presenting new research via poster presentations and invited talks, these meetings also provide our scientists with opportunities to establish new research contacts or be inspired by the latest theories, techniques, and applications in their discipline. Examples of recent

meetings attended by FNPRU scientists and support staff include the American Society for Horticultural Science Conference (Las Vegas, Nevada); the meeting of the American Phytopathological Society (Austin, Texas); the joint meeting of the three divisions of the International Union of Microbiological Societies (San Francisco, California); the joint meeting of the American Society of Plant Taxonomists and the Botanical Society of America (Austin, Texas); and the Southern Nursery Association Research Conference (Atlanta, Georgia).



The white markings, or streaks, on the petals of this pink New Guinea impatiens are caused by a previously unknown virus. This is one of several new and emerging viruses that FNPRU scientist Dr. Ramon Jordan is studying to determine both positive and negative effects of these viruses on important ornamental plants.

Arboretum Represented at Nursery Association Trade Show in Atlanta

The National Arboretum participated in the annual Southern Nursery Association (SNA) Trade Show and Convention held this year August 11th-13th at the Georgia World Congress Center in Atlanta, Georgia. Over 10 acres of products

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from 700 exhibitors were showcased. Attendance was estimated at 12,000.

The Arboretum displayed a booth at the show that featured posters highlighting research activities of the Floral and Nursery Plants Research Unit (FNPRU). Three USNA plant releases were on display: ‘Arapaho’ and ‘Cheyenne’ crapemyrtle and ‘Don Egolf’ redbud. Ed McCarthy of the Gardens Unit and Sandy Reed and Donna Fare of the FNPRU McMinnville, Tennessee, work site staffed the booth.

USNA scientists from the McMinnville staff also participated in the 50th Annual SNA Research Conference, held in conjunction with the trade show. Dr. Sandy Reed presented a poster paper (“Stabilizing Dogwood Seed Supply through Proper Storage of Excess Seed”) and chaired the “Growth Regulators” section. Dr. Keri Jones gave an oral presentation (“Recent Developments in Hydrangea Interspecific Hybridization”), while Dr. Donna Fare presented two poster papers (“Nitrogen and Phosphorus Levels in Container



Ed McCarthy with the USNA booth at the August Southern Nursery Association Trade Show in Atlanta.

Grown Willow Oak and Sweetbay Magnolia” and “Redbud Germination Affected by Seed Treatment”).

Class of 2005 Brings Diverse Backgrounds, Experience to Arboretum Internships

For many years, summertime has meant fresh faces and new talent at the Arboretum. For several months, or in some cases for a full year, the Arboretum’s ranks swell with the welcome addition of students and career changers, who take their places in the gardens, collections, labs, and offices to help advance critical work and projects. This year’s group included individuals from as far away as Minnesota and ranged from recent high school graduates to experienced professionals seeking new job opportunities. The Arboretum gratefully acknowledges the continued financial support of stakeholder groups and individuals for many of these positions. This year’s class:

Administration

A marketing intern was hired this year to assist with plans for the planned classical Chinese garden. Chia Whitehouse, an experienced marketing professional, helped with many aspects of developing plans for the promotion of the new 12-acre garden. Chia attended Johns Hopkins University at Nanjing University in China to study Chinese history and philosophy and speaks fluent Chinese. She also holds a master’s degree in

Communication and Information Studies from Rutgers State University of New Jersey and a bachelor’s degree in history from Drew University.

Asian Collections

Stefan Lura will work in the Asian Collection for 12 months. He is from Minnesota and graduated from the University of Minnesota in 2002 with a bachelor’s in environmental design. This internship is sponsored by the Chadwick Endowment.

Dogwood Collection

Amy Price spent the summer in the Dogwood Collection. Amy is attending the College of William and Mary and will graduate in 2007. From Silver Spring, Maryland, Amy will be working on identification and mapping in areas of the Dogwood Collection. This internship is supported by Woman’s National Farm & Garden Association.

Dwarf and Slow Growing Conifer Collection

Tim Hoisington was so eager to work at the Arboretum that he applied for the Conifer Collection internship before he had graduated high school in Alexandria, Virginia. Tim volunteered in the gardens until his internship could begin after graduation. The Conifer Collection intern is sponsored by a private donor.

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Friendship Garden

Jake Jarosz began his internship in June in the Friendship Garden. Jake just graduated from a local Independent Study High School in June and plans to attend college in the fall when he'll continue working in the garden part-time, 2 days a week until February. Jake's internship is sponsored by the National Capital Area Federation of Garden Clubs, Inc.

National Herb Garden

Meg Williams was a bonus this year, working from March through June to complete an herb garden internship from 2004 that ended early. Meg is from Silver Spring, Maryland, and graduated from Montgomery College last December with an associate's degree in landscape technology. While Meg's time here was short, the Herb Garden was grateful for the extra hands to help out with spring cleanup of the garden. Jessica Blackford is the 12-month Herb Garden intern for 2005. Jessica is from Baltimore, Maryland, and received her BA from the

University of Washington, in Seattle. Jessica's interest in food science will take her back to school to work towards her masters. Jessica will be working in the Beverage and Asian Theme Gardens to help develop informational plant signs to educate the public about the many uses of herbs.

Native Plant Collections

Funds for the Fern Valley native plant intern come from proceeds from the annual Lahr Symposium, held at the Arboretum each March. Leslie Heimer was this year's Lahr intern. She is from Hagerstown, Maryland, and attended College of the Atlantic in Bar Harbor, Maine, to study human ecology. Leslie collected and prepared specimens for the Arboretum's herbarium.

Shrub Breeding

Andrew "Roo" Vandegrift, a biology student at Virginia Polytechnic Institute and State University in Blacksburg, Virginia, chose a research internship. Working with the Shrub Breeding program, he extracted DNA from box

huckleberry in order to fingerprint individual plants for analysis. He was looking for genetic relationships in different populations. The Research Unit supports this position through a Cooperative Research and Development Agreement with McCorkle Nurseries.

For up-to-date information on the Arboretum's internship program, see <http://www.usna.usda.gov/Education/intern.html>.



Back row, l-r: Tim Hoisington, Leslie Heimer, Amy Price, Jessica Blackford
Front row, l-r: Andrew Vandegrift, Stefan Lura, Jacob Jarosz, Chia Whitehouse

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